REMARKS

Claims 2-6, and 8-19 are all the claims pending in the application. Claim 2 is the only independent claim.

Claim Rejection Under 35 U.S.C. § 103

Claims 1-19 were rejected under 35 U.S.C. § 103(a) as being obvious over Iheme et al. (2001/0039058) in view of MatWeb (Deflection Temperature Testing of Plastics - Typical Deflection Temperatures and Melting Points of Polymers [Archived from the Internet June 5, 2002]).

Applicant has amended independent claim 2 to recite:

> wherein the leg portion A of the stopper is made of *a thermoplastic elastomer or a thermosetting elastomer* or the leg portion A of the stopper has a surface layer comprising *a thermoplastic elastomer or a thermosetting elastomer* at least at a portion contacting with the internal wall surface of the container.

This amendment is supported *at least* by the exemplary embodiment disclosed at paragraph [0026] and shown in Figs. 9 and 10, the exemplary embodiment disclosed at paragraph [0034] and shown in Figs. 13 and 14, and the Examples 1, 2 shown in Figs. 17-19. The stopper of claim 2 includes a leg portion A (or a surface of the leg portion A) t*hat has different characteristics than the leg portion B of the stopper*.

Applicant respectfully requests the Examiner to withdraw the rejection of independent claim 2 because there is no reasonable combination of Iheme and MatWeb that would meet all of the recitations of amended claim 2.

One technical feature of claim 2 is that the deflection temperature, under a load of 0.45 MPa or 0.46 MPa, of at least a portion of the leg portion B of the stopper, which contacts the container, is higher than a deflection temperature, under a load of 0.45 MPa or 0.46 MPa, of at least a portion of the container, which contacts the leg portion A of the stopper. When a sealed container is left under high temperatures, the internal diameter of the container is subjected to an expanding force. But the internal diameter of the open end of the container is prevented from being expanded due to a fitting force exerted from the outside of the container by the leg portion B of the stopper, thereby making it possible to prevent the stopper from coming off due to slackening. See specification at paragraph [0017].

In addition, claim 2 now recites that the leg portion A of the stopper is made of *a thermoplastic elastomer or a thermosetting elastomer* or the leg portion A of the stopper has a surface layer comprising *a thermoplastic elastomer or a thermosetting elastomer* at least at a portion contacting with the internal wall surface of the container. With this structure, it becomes possible to further improve the sealing property. Moreover, this requirement prevents the stopper from coming off due to slackening. As explained above, when the sealed container is left under high temperatures, the internal diameter of the container is subjected to an expanding force, while the expansion is prevented due to a fitting force exerted from the outside of the container by the leg portion B of the stopper. Namely, the open end of the container is squeezed and transformed by the leg portion B of the stopper. However, if the leg portion A of the stopper is made of a thermoplastic elastomer or a thermosetting elastomer or the leg portion A of the stopper has a surface layer comprising a thermoplastic elastomer or a thermosetting elastomer at

least at a portion contacting with the internal wall surface of the container, as recited in claim 2, this transformation of the open end of the container can occur more easily.

For example, referring to the non-limiting, exemplary stopper of Example 1 shown in Fig 19, first, by using high-impact polystyrene ("PSJ polystyrene", deflection temperature under load (0.45 MPa): about 75°C, manufactured by PS Japan Corporation), a head portion and a leg portion B were integrally molded through an injection molding. Next, a styrene-based thermoplastic elastomer ("RABALON", JIS A hardness: about 50, manufactured by Mitsubishi Chemical Corporation) was inserted to predetermined positions of the resulting head portion and leg portion B, and a leg portion A was molded. Thus the stopper of Example 1 has parts that are made of different polymers, i.e., the leg portion A which is made of styrene-based thermoplastic elastomer and the leg portion B which is made of high-impact polystyrene.

In contrast to claim 2, Iheme merely discloses that a material for the cap 20A-C (see Iheme at paragraph [0069]) and the vessel (see Iheme at paragraph [0070]) including a polymer having a deflection temperature, under a load of 0.45 MPa or 0.46 MPa, of 60°C or more.

However Iheme et al never disclose to select the combination of the material forming the stopper and the material farming the container as defined in claim 2. As the Examiner pointed out, the combination of polypropylene and polycarbonate is included as a possibility. However, there is not any suggestion to select this combination from other combinations. Iheme discloses that HDPE or a mixture of LDPE and HDPE are preferable for the cap (see Iheme at paragraph [0069]), and the actual examples of Theme only show the combination of the caps made of HDPE and the vessel made of polypropylene.

Iheme never disclose or suggests any embodiment of the cap in which (1) the leg portion A of the stopper is made of a *thermoplastic elastomer or a thermosetting elastomer* or the leg portion A of the stopper has a surface layer comprising a *thermoplastic elastomer or a thermosetting elastomer* at least at a portion contacting with the internal wall surface of the container and (2) a deflection temperature, under a load of 0.45 MPa or 0.46 MPa, of at least a portion of the leg portion B of the stopper, which contacts the container, is higher than a deflection temperature, under a load of 0.45 MPa or 0.46 MPa, of at least a portion of the container, which contacts the leg portion A of the stopper. For example, even assuming *arguendo* that the cap were made of polycarbonate, there is no teaching or suggestion in Iheme regarding modifying this embodiment so that the leg portion A would meet the recited characteristics. That is, Iheme never discloses the cap having parts that are made of different polymers.

Thus, Applicant respectfully requests the Examiner to withdraw this rejection of claim 2.

In addition, Applicant respectfully requests the Examiner to withdraw the rejection of dependent claims 3-6 and 8-19 at least because of their dependency from claim 2.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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